WHAT IS CLAIMED IS:

1. An image processing device for computing a total density for at least four kinds of sub pixel groups provided in a main pixel group, which is constituted by a plurality of pixels including a target pixel, and for making area determination based on the total densities, upon area determination of the target pixel in an inputted image data.

2. The image processing device as defined in claim 1, wherein said area determination determines if said target pixel is an edge area or not.

3. The image processing device as defined in claim 1, wherein normalization is performed with a coefficient when said sub pixel groups are different in size from one another.

4. The image processing device as defined in claim 1, wherein said sub pixel groups are disposed on or around an end of said main pixel group.

5. The image processing device as defined in claim 1, wherein total densities of four kinds of said sub pixel groups are categorized into two groups, total density differences of said two groups are added so as to complete

a value S, and area determination is made based on the value S.

6. The image processing device as defined in claim 5, wherein in said main pixel group, a complication degree is computed by summing density differences between adjacent pixels or pixels disposed with a fixed interval in a main scanning direction, and a complication degree is computed by summing density differences between adjacent pixels or pixels disposed with a fixed interval in a sub scanning direction, and area determination is further made based on the computing result.

7. The image processing device as defined in claim 6, wherein after determination is made based on the value S if the target pixel is an edge area or not, a difference is computed between the complication degree in a main scanning direction and the complication degree in a sub scanning direction regarding a non-edge area, and determination is made again if the target pixel is an edge area or not based on the computing result.

8. The image processing device as defined in claim 6, wherein after determination is made based on the value S if the target pixel is an edge area or not, a total of the

complication degree in a main scanning direction and the complication degree in a sub scanning direction is computed regarding a non-edge area, and determination is made again if the target pixel is a dot mesh area or a non-edge area based on the computing result.

9. The image processing device as defined in claim 6, wherein the complication degree in a main scanning direction is a total of density differences of every other pixel, and the complication degree in a sub scanning direction is a total of density differences of adjacent pixels.

10. The image processing device as defined in claim 1, wherein an average density or a total density of said main pixel group is computed, and determination is made based on the computing result if the target area is an edge area or not.

11. The image processing device as defined in claim 10, wherein upon computing an average density of said main pixel group, a total density is not divided by the number of pixels but by a power of 2 being the closest to the number of pixels.

12. The image processing device as defined in claim 2,

wherein when determining if a target pixel is an edge area or not based on a total density of said sub pixel groups, after determination of an edge area is successively made for a predetermined times or with a predetermined frequency, a threshold value for determining if the target pixel is an edge area or not is changed.

13. The image processing device as defined in claim 1, wherein upon area determination, a plurality of determining operations are performed in a predetermined order.

14. The image processing device as defined in claim 13, wherein determination is made based on a computing result of an average density or a total density of said main pixel group, before determination based on the value S, determination based on a difference between the complication degrees in a main scanning direction and in a sub scanning direction, and determination based on a total of the complication degrees in a main scanning direction and in a sub scanning direction.

15. The image processing device as defined in claim 13, wherein determination is made in an order of: determination based on a computing result of an average density or a total density of said main pixel group, determination based on the

value S, determination based on a difference between the complication degrees in a main scanning direction and in a sub scanning direction, and determination based on a total of the complication degrees in a main scanning direction and in a sub scanning direction.

16. The image processing device as defined in claim 1, wherein all determination methods are executed in parallel: determination based on a computing result of an average density or a total density of said main pixel group, determination based on the value S, determination based on a difference between the complication degrees in a main scanning direction and in a sub scanning direction, and determination based on a total of the complication degrees in a main scanning direction and in a sub scanning direction.

17. The image processing device as defined in claim 16, wherein said area determination made in said parallel operation uses a truth table.

18. An image processing device for changing a coefficient of a filter processing based on an area determined in area determination processing of claim 1.

19. An image processing device for changing a gamma correction table based on an area determined in area determination processing of claim 1.

20. An image processing device for changing an error diffusion parameter based on an area determined in area determination processing of claim 1.